

PATENT
Atty. Dkt. No. NVDA/P000723

IN THE CLAIMS:

1. (Currently Amended) A system for cooling a processor, the system comprising:
a heat sink assembly having a fan, walls, and a bottom surface, wherein the walls and at least a portion of the bottom surface define an air channel, and the heat sink assembly is configured to be thermally coupled disposed onto the processor; and
a heat sink lid coupled to the heat sink assembly, wherein:
the heat sink lid is configured to leave a substantial portion of the air channel uncovered, and
the heat sink assembly is further configured such that air flows directly from the fan along the bottom surface of the heat sink assembly, and
the length of the at least a portion of the bottom surface is equal to or greater than the length of the processor.
2. (Original) The system of claim 1, further comprising a thermal adhesive disposed on an outer surface of the heat sink assembly for thermally coupling the heat sink assembly to the processor.
3. (Previously Presented) The system of claim 1, wherein the uncovered portion of the air channel reduces air flow noise in the system during operation.
4. (Previously Presented) The system of claim 3, wherein the uncovered portion of the air channel reduces air flow noise by preventing the formation of a standing wave within the air channel during operation.
5. (Previously Presented) The system of claim 4, wherein the uncovered portion of the air channel prevents the formation of the standing wave by preventing the reflection of an incident wave propagating within the air channel during operation.

PATENT
Atty. Dkt. No. NVDA/P000723

6. (Original) The system of claim 1, wherein the heat sink lid includes an edge configured to reduce turbulent flow of air escaping from the air channel and flowing across the edge.
7. (Original) The system of claim 6, wherein the edge is substantially perpendicular to a direction of air flow within the air channel.
8. (Original) The system of claim 1, wherein the processor comprises a graphics processing unit.
9. (Original) The system of claim 1, wherein the processor comprises a central processing unit.
10. (Original) The system of claim 1, wherein the processor comprises an application-specific integrated circuit.
11. (Currently Amended) A heat sink lid configured to couple to a heat sink assembly that is thermally coupled to a processor such that a substantial portion of an air channel in the heat sink assembly is left uncovered,
wherein:
the heat sink lid includes an edge configured to reduce turbulent flow of air that escapes from the air channel and flows across the edge, and
the edge is substantially perpendicular to a direction of air flow within the air channel.
12. (Previously Presented) The heat sink lid of claim 11, wherein the uncovered portion of the air channel and the heat sink lid reduce air flow noise when the heat sink assembly operates to cool the processor.
13. (Previously Presented) The heat sink lid of claim 11, wherein the uncovered portion of the air channel and the heat sink lid reduce air flow noise by preventing the

PATENT
Atty. Dkt. No. NVDA/P000723

formation of a standing wave within an air channel of the heat sink assembly during operation.

14. (Previously Presented) The heat sink lid of claim 13, wherein uncovered portion of the air channel and the heat sink lid prevent the formation of the standing wave by preventing the reflection of an incident wave propagating within the air channel.

15. (Canceled)

16. (Canceled)

17. (Previously Presented) The system of claim 1, wherein the heat sink lid is directly coupled to the walls.

18. (Previously Presented) The system of claim 1, wherein the bottom surface is substantially flat.

19. (New) A method of using the system of claim 1, comprising providing the system of claim 1; and installing the system into a computer so that the substantial portion of the air channel remains uncovered, thereby reducing air flow noise in the system during operation.

20. (New) A method of using the system of claim 1, comprising providing the system of claim 1; and installing the system onto the processor.

21. (New) The method of claim 20, wherein the processor is a graphics processing unit or a central processing unit and the air channel is disposed over the processor and substantially extends across the length of the processor.